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FOR 1910

Introductory Survey

Strayer, George Grayton



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INTRODUCTORY SURVEY.

By GEORGE DRAYTON STRAYER,

Teachers College, Columbia University.

The collection and interpretation of the statistics of education for the entire country is one of the chief functions of the Bureau of Education, and hence importance attaches to recent provision for extending and perfecting this part of the service. The appointment of two additional specialists—in higher education and in school administration—and the formation of a division under each of these specialists has made it possible to cover more completely and adequately these departments of the general educational work of the country. The specialists not only have charge of the work in the office at Washington, but also spend a considerable part of the time in personal investigations in their respective fields. Knowledge thus acquired helps materially in the interpretation of the statistics.

The statistical service of the bureau has also been improved by increased cooperation with other bodies engaged in educational investigations. Within the past three months the bureau has had printed and sent to superintendents throughout the United States the form of cumulative pupil record card recommended by the committee on uniform statistics of the department of superintendence of the National Education Association. The returns received from the superintendents indicate a favorable reception of the system. This result could not have been secured without the cooperation of the bureau. With the general use of this card throughout the country it will be possible to study problems of retardation and elimination, of variation in the curriculum, of organization and conduct of special classes, and similar problems from data at once reliable and complete. A copy of the form suggested is given on the following page.

Form suggested for pupil record card.

[illegible]

When a pupil is permanently discharged to work, to remain at home, or because of death, permanent illness, or commitment to an institution, this card is to be returned to the principal's office and a full statement of the cause of the pupil's discharge is to be made in the blank space remaining above. (OVER)

(OVER)

[Reverse.]

[illegible]

(OVER)

ELEMENTARY SCHOOL RECORD SYSTEM—PROMOTION RECORD.

This card is to pass from teacher to teacher or from school to school as the pupil is promoted or transferred. It is to be filled out and sent to the principal's office when any change is made requiring a change in the office records. It is then to be sent to the teacher who has the pupil.

On the invitation of the Bureau of Education representatives of the Bureau of the Census, of the National Association of School Accounting Officers, and of the committee of the department of superintendence on uniform statistics, have held several conferences in Washington, and have finally recommended a form of report which it is proposed to use in the Census Office and in the Bureau of Education. In this case the form proposed is tentative and has been sent by the Bureau of Education to school superintendents with a view to securing their opinion before the final form of the schedule is adopted.

The need for uniform fiscal statistics is everywhere acknowledged. In many of our cities one-third of the entire city revenue is devoted to education. In some communities the amount of money which is raised can not be greatly increased. Demands from all departments of the city government for increased funds are insistent. Increased expenditure for education must be justified by showing the maximum of return for money already granted, and such showing requires a system of accounts and of reports at least as elaborate as that comprised in the schedule of fiscal statistics recommended by the bureau and the other bodies cooperating in the work. The schedule follows:

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, D. C.

.....Name of city.

DIVISION OF SCHOOL ADMINISTRATION.

.....State.

CITY PUBLIC SCHOOLS.

FINANCIAL REPORT.

(Form used jointly by the Bureau of Education and the Bureau of the Census.)

Financial statistics for the fiscal year ending, 1911.

A.—PAYMENTS.

	Total.	Salaries.	Other objects.
I.—EXPENSES (Cost of Conducting School System).			
<i>Expenses of general control (overhead charges).</i>			
1. Board of Education and Secretary's Office.....
2. School elections and school census.....
3. Finance offices and accounts.....
4. Legal services.....
5. Operation and maintenance of office building.....
6. Offices in charge of buildings and supplies.....
.....
7. Office of superintendent of schools.....
8. Enforcement of compulsory education and truancy laws.....
9. Other expenses of general control.....
10. Total.....

A.—PAYMENTS—Continued.

[illegible]

XI

[illegible]

III.—OTHER PAYMENTS.

53. Redemption of bonds.....	\$.....
54. Redemption of short-term loans.....	.....
55. Payment of warrants and orders of preceding year.....	.....
56. Payments to sinking funds.....	.....
57. Payments of interest.....	.....
58. Miscellaneous payments, including payments to trust funds, textbooks to be sold to pupils, etc.....	.....
59. Total.....	.....
60. Balances at close of year at.....	\$.....
61. Total payments and balances.....	.....

B.—RECEIPTS.

Revenue receipts.

62. Subventions and grants from State.....	\$.....
63. Subventions and grants from county.....	.....
64. Subventions and grants from other civil divisions.....	.....
65. Appropriations from city treasury.....	.....
66. General property taxes.....	.....
67. Business taxes (licenses, excise taxes, taxes on corporations, taxes on occupations, etc.).....	.....
68. Poll taxes.....	.....
69. Fines and penalties.....	.....
70. Rents and interest.....	.....
71. All other revenue.....	.....
72. Total revenue receipts.....	.....

Nonrevenue receipts.

73. Loans and bond sales.....	\$.....
74. Warrants issued and unpaid.....	.....
75. Sales of real property and proceeds of insurance adjustments.....	.....
76. Sales of equipment and supplies.....	.....
77. Refund of payments.....	.....
78. Other nonrevenue receipts.....	.....
79. Total nonrevenue receipts.....	.....
80. Total receipts.....	\$.....
81. Balances at beginning of year.....	.....
82. Total receipts and balances.....	.....

The Bureau of Education is in intimate contact with field work in the school system for Alaska, which is under its direct control. Through the Alaska school service the bureau is conducting an important experiment, in the education of a primitive people of different races, in the widely varying regions and climates of a vast territory, all more or less affected by their contact with civilization. The problem concerns the adults as well as the children; in addition to teaching the children the ways of the schools, whole communities must be elevated. To this end the school work emphasizes practical instruction in such industries as carpentry, sewing, cooking, and the raising of vegetables. In the villages the attempt is made to inculcate the principles of morality and thrift, also to establish sanitary conditions by encouraging the erection of well-constructed houses, by insisting upon personal cleanliness, and the proper disposal of garbage.

Throughout the Alaska school service provision is made for the physical welfare of the natives by employing physicians who treat

the natives when diseased and who instruct them in sanitary methods of living. Medicines and medical text-books are furnished to the teachers in order that they may be able to treat minor ailments. Two hospitals are under contract to furnish care and treatment to diseased natives upon the application of superintendents or teachers. Food and clothing are occasionally given to destitute natives.

During the fiscal year 1909-10 the field force in Alaska consisted of 5 superintendents, 98 teachers, 10 physicians (5 of whom also fill other positions in the Alaska school service), 3 nurses, and 8 contract physicians. Seventy-seven United States public schools for natives were maintained with an enrollment of 3,964 pupils and an average attendance of 1,692.

Thus it will be seen that members of the staff of the Bureau of Education are vitally concerned with the working out of significant educational problems.

In the chapters which follow will be found tabulated the data concerning the teaching staff, the student body, the material equipment, the receipts, the expenditures, and, in some instances, the branches of study for each group or class of schools in the United States. Tables which summarize briefly certain of these data for the whole country are included in this chapter. Table A brings into contrast the more important items of statistics of public elementary and high schools for the year 1908-9 with the corresponding items for 1870, 1880, 1890, 1900, 1901, 1902, etc. Tables B and C give certain particulars relating to the length of public school term, the number of days attended, the percentage of attendance, the expenditure per capita of population, expenditure for buildings and sites, for salaries, and for all other purposes. The presentation by geographical divisions and by States makes possible a comparison of educational practice among the several political divisions of our country. Table D gives the number of pupils and students of all grades in public and private schools and colleges, by geographical divisions.

The tables mentioned above need no interpretation, further than to point out the mistake of applying to a particular school or locality within a State or section the single figure given in these summaries for geographical divisions. To discover the truth about any particular community or school, it is necessary to find the data involved in the inquiry for that special case.

TABLE A.—Common-school statistics of the United States.

	1869-70.	1879-80.	1889-90.	1899-1900.	1900-1901.	1904-5.	1905-6.	1906-7.	1907-8. ^a	1908-9.
I.—General statistics.										
Total population.....	b 38,558,371	b 50,155,783	b 62,622,250	b 75,602,515	c 77,274,967	c 82,584,061	c 83,935,399	c 85,526,761	c 86,874,990	c 90,161,309
Persons 5 to 18 years of age.....	b 12,055,443	b 15,065,767	b 18,543,201	b 21,404,322	c 21,908,636	c 23,410,800	c 23,792,723	c 24,262,936	c 24,613,763	c 24,239,820
Pupils enrolled (duplicates excluded).....	6,871,522	9,887,505	12,722,581	15,503,110	15,702,517	16,468,300	16,644,970	16,890,818	17,061,962	17,506,175
Per cent of total population enrolled.....	17.82	19.67	20.32	20.51	20.32	19.94	19.94	19.75	19.64	19.4
Per cent of persons 5 to 18 years of age enrolled.....	57.00	65.50	68.61	72.43	71.67	70.35	70.43	69.61	69.32	72.22
Average daily attendance.....	4,077,347	6,144,143	8,153,635	10,632,772	10,716,094	11,481,531	11,712,300	11,925,672	12,154,172	12,684,837
Relation of same to enrollment (per cent).....	59.3	62.3	64.1	68.6	68.2	69.9	70.4	70.60	71.21	72.5
Average length of school term (days).....	132.2	130.3	134.7	144.3	143.7	150.7	150.6	151.8	154.1	155.3
Total number of days attended by all pupils.....	539,053,423	800,719,970	1,098,232,725	1,534,822,633	1,539,576,527	1,732,845,238	1,763,512,391	1,810,145,355	1,872,736,054	1,970,117,978
Average number of days attended by each person 5 to 18.....	44.7	53.1	59.2	71.8	70.3	74.0	74.1	74.6	76.1	81.3
Average number of days attended by each pupil enrolled.....	78.4	81.1	86.3	99.0	98.0	105.2	106.0	107.3	109.8	112.6
Male teachers.....										
Female teachers.....	77,529	122,795	125,525	126,588	125,838	110,532	109,179	104,414	104,495	108,300
	122,986	163,798	238,397	296,474	306,080	349,737	356,884	376,902	390,968	398,153
Whole number of teachers.....										
Per cent of male teachers.....	200,515	286,563	363,922	423,062	431,918	460,269	466,063	481,316	495,463	506,040
Average monthly wages of male teachers ^a	38.7	42.8	34.5	29.9	29.1	24.0	23.6	21.7	21.1	21.4
Average monthly wages of female teachers ^a				\$46.53	\$47.55	\$55.04	\$56.31	\$58.06	\$62.35	\$63.39
Number of schoolhouses ^c			224,526	248,279	\$39.17	\$42.69	\$43.80	\$44.08	\$51.61	\$50.08
Value of all school property.....	\$130,383,008	\$209,571,718	\$342,531,791	\$530,069,217	\$572,125,215	\$733,446,805	\$783,128,140	\$858,655,209	\$945,395,162	\$967,773,387
II.—Financial statistics.										
Receipts:										
From income of permanent funds and rents.....			\$7,744,765	\$9,152,274	\$9,767,110	\$13,194,042	\$11,641,059	\$25,532,051	\$22,419,282	\$13,746,826
From state taxes.....			\$26,345,323	\$37,886,740	\$36,281,256	\$44,349,295	\$47,942,509	\$44,706,078	\$58,097,151	\$63,247,354
From local taxes.....			\$97,222,426	\$149,486,845	\$163,897,478	\$210,167,770	\$223,491,405	\$231,738,052	\$259,340,960	\$288,642,500
From all other sources.....			\$11,882,292	\$23,240,130	\$25,393,493	\$34,107,962	\$39,031,031	\$53,039,992	\$42,062,133	\$38,010,609
Total received.....			\$143,194,806	\$219,765,989	\$235,339,337	\$301,819,069	\$322,106,004	\$355,016,173	\$381,919,526	\$403,647,289

[illegible]

^eIncluding buildings rented.

^c Estimated.

^a The figures for this year are subject to correction.
^b United States census.

TABLE B.—*Certain items relating to length of public school term, number of days attended, percentage of attendance, and expenditure per capita of population, 1908-9.*

State or Territory.	Average number of days the schools were kept during the year.	Average number of days' attendance for every child 5-18 years of age.	Average number of days' attendance by each pupil enrolled.	Per cent of school population (i. e., children 5-18 years of age) enrolled.	Per cent of the pupils enrolled who are in daily attendance.	Expenditure per capita of total population.
1	2	3	4	5	6	7
United States.....	155.3	81.3	112.6	72.22	72.5	\$4.45
North Atlantic Division.....	179.0	102.2	141.0	72.47	78.7	5.55
South Atlantic Division.....	138.6	59.3	84.7	70.00	66.5	2.19
South Central Division.....	123.3	54.2	79.7	68.03	64.6	2.00
North Central Division.....	164.7	92.2	124.1	75.19	75.3	5.39
Western Division.....	161.2	90.4	119.0	76.03	73.8	6.59
North Atlantic Division:						
Maine.....	148.0	94.0	109.8	85.46	74.2	3.76
New Hampshire.....	161.1	83.6	119.1	69.88	73.9	3.64
Vermont.....	160.0	a 128.4	136.4	a 94.29	87.0	4.27
Massachusetts.....	186.0	112.7	153.1	73.61	82.2	5.87
Rhode Island.....	194.0	100.2	151.2	66.39	77.6	4.87
Connecticut.....	184.5	106.4	142.4	74.90	77.2	4.61
New York.....	186.3	107.0	148.5	71.97	79.6	6.01
New Jersey.....	188.0	94.6	137.2	68.99	72.9	6.36
Pennsylvania.....	169.0	95.6	133.1	71.84	79.1	5.12
South Atlantic Division:						
Delaware.....	b 170.1	86.8	116.6	74.40	68.6	b 2.73
Maryland.....	187.0	77.9	112.5	66.57	62.0	2.93
District of Columbia.....	177.1	110.1	151.1	77.46	80.2	8.62
Virginia.....	131.0	52.4	85.7	61.09	65.4	2.16
West Virginia.....	135.5	81.0	87.5	85.45	70.1	3.60
North Carolina.....	101.3	50.9	65.3	74.75	64.5	1.38
South Carolina.....	98.0	43.7	67.5	64.67	68.9	1.28
Georgia.....	c 132.0	57.9	86.2	67.16	65.3	1.56
Florida.....	115.6	64.8	82.9	78.45	71.7	2.36
South Central Division:						
Kentucky.....	120.0	52.3	71.1	73.62	59.3	2.13
Tennessee.....	128.0	63.8	86.4	73.77	67.5	1.57
Alabama.....	115.9	46.6	75.6	61.54	65.3	1.19
Mississippi.....	123.0	58.9	76.1	76.41	61.9	1.51
Louisiana.....	130.9	42.4	90.3	46.98	69.1	2.22
Texas.....	128.0	55.8	85.4	65.46	66.9	2.71
Arkansas.....	98.2	45.7	63.8	71.65	65.1	2.01
Oklahoma.....	140.0	66.0	87.1	75.75	62.3	2.20
North Central Division:						
Ohio.....	170.0	105.3	140.9	74.81	82.8	5.41
Indiana.....	150.0	96.6	120.3	80.30	80.1	d 4.97
Illinois.....	171.6	100.0	134.7	74.93	78.6	5.99
Michigan.....	171.8	102.5	143.5	71.47	83.6	5.31
Wisconsin.....	168.0	79.1	116.2	68.17	69.2	4.63
Minnesota.....	161.5	83.2	114.7	72.50	70.9	5.86
Iowa.....	176.0	100.4	124.1	79.65	71.7	5.35
Missouri.....	151.0	78.4	107.1	75.19	70.2	4.03
North Dakota.....	144.0	84.9	93.8	90.60	65.3	8.24
South Dakota.....	154.0	78.4	97.1	80.79	62.9	6.49
Nebraska.....	174.0	93.8	111.2	79.15	68.1	6.08
Kansas.....	154.0	90.1	113.1	79.59	73.6	5.90
Western Division:						
Montana.....	139.4	79.5	116.8	68.75	84.0	6.00
Wyoming.....	139.1	85.3	99.6	85.18	71.6	4.34
Colorado.....	156.2	84.7	98.7	85.79	63.2	6.71
New Mexico.....	118.0	43.3	72.6	60.00	61.2	1.83
Arizona.....	135.0	47.9	83.2	85.30	62.1	4.59
Utah.....	162.0	90.2	125.8	72.03	77.8	7.63
Nevada.....	155.6	72.0	110.1	64.54	70.8	6.52
Idaho.....	136.6	80.2	93.9	85.07	69.0	6.58
Washington.....	171.2	111.4	125.7	88.79	73.3	8.06
Oregon.....	128.8	86.9	106.9	80.85	83.5	5.67
California.....	185.0	97.3	142.9	68.09	77.4	7.05

a The enumeration upon which this calculation was based appears to have been defective. See footnote c, Table 1, page 669.

b Approximate.

c The schools were maintained an average of 105 days from public funds.

d Does not include all expenditures. See footnote e, Table 10, page 678.

TABLE C.—(1) *Expenditures per pupil (based on average attendance); (2) Average daily expenditures per pupil; (3) percentage analysis of school expenditure—all for 1908-9.*

State or Territory.	Expenditure per capita of average attendance.				Average daily expenditure per pupil.		Percent of total expenditures devoted to—		
	For sites, buildings, etc.	For salaries.	For all other purposes.	Total per pupil.	For salaries only.	Total.	Sites, buildings, etc.	Salaries.	All other purposes.
1	2	3	4	5	6	7	8	9	10
United States	\$6.45	\$18.09	\$6.51	\$31.65	<i>Cents.</i> 12.1	<i>Cents.</i> 20.4	20.4	59.2	20.4
North Atlantic Division	9.26	24.40	9.37	42.03	13.7	24.1	21.6	56.6	21.8
South Atlantic Division	2.75	10.46	2.36	15.57	8.2	12.3	17.5	67.4	15.1
South Central Division	1.57	10.88	1.49	13.94	8.8	11.4	11.2	78.1	10.7
North Central Division	7.41	20.19	7.92	35.52	12.3	21.6	20.7	56.7	22.6
Western Division	11.97	27.35	10.59	49.91	17.1	30.5	24.1	54.8	21.1
North Atlantic Division:									
Maine	3.96	<i>a</i> 18.16	<i>a</i> 3.39	25.51	<i>a</i> 12.3	17.3	15.5	<i>a</i> 71.2	<i>a</i> 13.3
New Hampshire	2.80	19.73	9.92	32.45	12.3	20.2	8.5	60.8	30.7
Vermont	<i>b</i> 2.99	<i>b</i> 15.61	<i>b</i> 7.73	<i>b</i> 26.33	9.9	16.8	11.3	59.3	29.4
Massachusetts	8.06	26.50	9.93	44.49	14.3	23.9	18.2	59.4	22.4
Rhode Island	11.73	23.21	7.22	42.16	12.1	21.7	27.7	55.1	17.2
Connecticut	5.99	20.76	7.96	34.71	11.3	18.8	17.3	59.6	23.1
New York	10.20	<i>c</i> 30.10	<i>c</i> 8.09	48.39	<i>c</i> 16.2	26.1	21.1	<i>c</i> 62.2	<i>c</i> 16.7
New Jersey	12.56	26.49	11.98	51.03	14.1	26.9	24.6	51.9	23.5
Pennsylvania	9.32	18.64	18.92	38.88	11.1	23.1	24.0	48.0	28.0
South Atlantic Division:									
Delaware (1904-5)		12.60	7.32	19.91	7.4	11.7		63.3	36.7
Maryland	2.11	18.61	4.77	25.49	9.9	13.5	8.4	73.2	18.4
District of Columbia	19.85	33.08	10.76	63.69	18.7	35.8	31.2	51.9	16.9
Virginia	4.50	10.48	2.04	17.02	8.0	13.1	26.4	61.6	12.0
West Virginia	2.61	13.84	5.88	22.33	10.2	16.4	11.7	61.9	26.4
North Carolina	2.12	6.22	.57	8.91	6.2	8.8	23.8	69.8	6.4
South Carolina .....	.76	6.47	1.03	8.26	6.6	8.4	9.3	78.2	12.5
Georgia	1.82	8.80	.56	11.18	6.7	8.5	16.3	78.6	5.1
Florida	2.52	11.22	3.14	16.88	9.7	14.5	16.1	66.4	18.5
South Central Division:									
Kentucky	1.72	11.36	2.75	15.83	6.7	13.2	10.8	71.7	17.5
Tennessee .....	.75	5.24	.67	6.66	6.1	7.7	11.2	78.7	10.1
Alabama .....	.25	<i>d</i> 8.90		9.15	<i>d</i> 7.7	7.9	2.4	<i>d</i> 97.6	
Mississippi .....	.38	8.10	1.01	9.49	6.5	6.7	4.1	85.3	10.6
Louisiana	2.57	14.68	3.85	21.10	11.2	16.1	12.3	69.4	18.3
Texas	2.99	13.97	1.59	18.55	10.9	14.5	16.3	75.2	8.5
Arkansas	2.48	10.40		12.88	10.6	13.1	19.4	80.6	
Oklahoma <i>e</i>		7.09	1.58	8.67	8.2	9.9		81.8	18.2
North Central Division:									
Ohio	6.96	21.88	9.91	38.75	12.8	22.7	18.1	56.4	25.5
Indiana <i>f</i>	4.28	19.96	7.29	31.53	13.2	20.9	13.5	63.2	23.3
Illinois	8.40	21.06	13.41	42.87	12.1	24.8	19.6	49.0	31.4
Michigan	<i>g</i> 14.44	18.51	(<i>g</i>)	32.95	10.8	19.1	<i>g</i> 43.7	56.3	(<i>g</i>)
Wisconsin	6.59	19.73	6.85	33.17	11.7	19.7	20.0	59.3	20.7
Minnesota	8.64	22.12	7.95	38.71	13.7	23.9	22.5	57.1	20.4
Iowa	2.11	22.18	8.72	33.01	12.6	18.8	6.3	67.2	26.5
Missouri	6.37	15.58	4.66	26.61	10.2	17.4	24.2	58.3	17.5
North Dakota	12.42	26.21	13.44	52.07	18.2	35.3	24.4	51.5	24.1
South Dakota	6.04	23.60	18.15	47.79	15.4	31.1	12.7	49.6	37.7
Nebraska	5.41	22.50	9.72	37.63	12.9	21.6	14.4	59.8	25.8
Kansas	7.93	18.59	2.44	28.96	12.1	18.7	27.5	64.1	8.4
Western Division:									
Montana <i>*</i>	16.77	31.96	9.71	58.44	18.7	34.3	28.7	54.7	16.6
Wyoming	8.76	25.10	2.62	36.38	18.1	26.1	24.2	68.7	7.1
Colorado	5.89	29.62	14.63	50.14	18.9	32.1	11.8	59.1	29.1
New Mexico <i>*</i>	2.71	13.34	4.22	20.27	10.5	15.5	13.4	65.5	21.1
Arizona	8.41	26.96	14.51	49.88	20.1	36.9	17.0	54.0	29.0
Utah	9.60	19.11	13.33	42.04	11.8	25.8	22.8	45.6	31.6
Nevada <i>*</i>	30.71	28.52	13.12	72.34	18.3	46.5	42.5	39.4	18.1
Idaho	8.70	21.32	9.30	39.31	15.6	28.7	22.2	54.3	23.5
Washington	13.14	27.12	16.73	56.99	15.8	33.2	23.1	47.5	29.4
Oregon	13.15	21.51	3.91	38.51	16.8	29.9	33.8	55.9	10.3
California	15.50	34.41	9.10	59.01	18.6	31.8	26.2	58.4	15.4

* Statistics of 1907-8.

a Salaries of janitors are reported with those of teachers.*b* See footnote *a*, Table 5, page 673.*c* Salaries of superintendents are reported with expenditures for all other purposes. See footnotes *b* and *e*, Table 13, page 681.*d* Refers to amount paid from state appropriation only.*e* Based upon estimates only.*f* Partly for 1907-8; see note *e*, Table 10, page 678.*g* Current expenses are reported with sites, buildings, etc.

TABLE D.—*Number of pupils and students of all grades in both public and private schools and colleges, 1908-9.*

NOTE.—The classification of States made use of in the following table is the same as that adopted by the United States census, and is as follows: *North Atlantic Division:* Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania. *South Atlantic Division:* Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, and Florida. *South Central Division:* Kentucky, Tennessee, Alabama, Mississippi, Louisiana, Texas, Arkansas, Oklahoma, and Indian Territory. *North Central Division:* Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas. *Western Division:* Montana, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Idaho, Washington, Oregon, and California.

Division.	Students receiving higher instruction.														
	Pupils receiving elementary instruction (primary and grammar grades). ^b		Pupils receiving secondary instruction (high-school grades). ^a		In universities and colleges. ^c				In schools of medicine, law and theology. ^e				In normal schools. ^g		Total higher.
	Public.	Private (largely estimated).	Public. ^b	Private (in preparatory schools, academies, seminaries, etc.).	Public. ^d	Private.	Total.	Public. ^f	Private.	Total.	Public.	Private.	Total.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
United States.....	16,643,149	1,316,900	863,026	171,801	65,779	117,565	183,344	12,619	53,164	65,783	74,370	7,918	482,288	152,768	178,047
North Atlantic Division.....	3,870,647	577,520	278,734	55,644	6,848	48,892	55,740	401	18,854	19,255	19,229	1,365	20,594	26,478	69,111
South Atlantic Division.....	2,495,894	96,980	54,213	25,765	6,823	14,723	21,546	1,659	8,024	9,683	5,258	1,493	13,740	13,740	24,240
South Central Division.....	3,676,235	121,609	69,667	29,380	6,644	12,042	18,686	1,768	6,093	7,861	9,519	1,957	11,476	17,981	20,092
North Central Division.....	5,521,520	462,655	381,119	48,159	34,609	36,336	70,945	7,730	18,508	26,238	35,246	2,824	38,070	77,585	57,668
Western Division.....	1,078,853	58,136	79,293	12,853	10,855	5,572	16,427	1,061	1,685	2,746	5,118	279	5,397	17,034	7,536

^a Including pupils in the preparatory or academic departments of higher institutions, public and private, and excluding elementary pupils who are classed in columns 2 and 3. A classification of public and of private secondary students, according to the character of the institutions in which they are found, is given in chapter of statistics of secondary schools, Volume II.

^b This is made up from the returns of individual high schools to the bureau, and is somewhat too small, as there are many secondary pupils outside the completely organized high schools whom there are no means of enumerating.

^c Including colleges for women, agricultural and mechanical (land-grant) colleges, and scientific schools. Students in law, theological, and medical departments are excluded, being tabulated in columns 9-11. Students in academic and preparatory departments are also excluded, being tabulated in columns 4 and 5.

^d Mainly state universities and agricultural and mechanical colleges.

^e Including also schools of dentistry, pharmacy, and veterinary medicine.

^f Mainly in schools or departments of medicine and law attached to state universities.

^g Nonprofessional pupils in normal schools are included in columns 4 and 5. There are, in addition to this number, 30,887 students taking normal courses in universities, colleges, and public and private high schools. (See chapter of statistics of normal schools, Volume II.)

TABLE D.—*Number of pupils and students of all grades in both public and private schools and colleges, 1908-9—Continued.*

Division.	Summary of pupils by grade.			Summary according to control.		Grand total.	Per cent in each grade of the whole number of pupils.			Per cent of public pupils.			Per cent of the total population enrolled in each grade.			
	Elementary.	Secondary.	Higher.	Public.	Private.		Elementary.	Secondary.	Higher.	Elementary.	Secondary.	Higher.	Elementary.	Secondary.	Higher.	Total.
1	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
United States.....	17,960,049	1,634,827	331,415	17,658,943	1,667,348	19,326,291	92.93	5.35	1.71	92.67	83.40	46.10	19.92	1.15	0.37	21.44
North Atlantic Division...	4,448,167	334,378	95,589	4,175,859	702,275	4,878,134	91.19	6.85	1.96	87.02	83.36	27.70	17.55	1.32	.38	19.25
South Atlantic Division...	2,592,874	79,978	37,980	2,563,847	146,985	2,710,832	95.65	2.95	1.40	96.26	67.78	36.18	21.59	.66	.32	22.57
South Central Division...	3,797,844	99,047	38,023	3,763,833	171,081	3,934,914	96.52	2.52	.97	96.80	70.34	47.16	22.56	.59	.23	23.38
North Central Division...	5,984,175	429,278	135,253	5,980,224	568,482	6,548,706	91.38	6.56	2.07	92.27	88.78	57.36	20.28	1.46	.46	22.30
Western Division.....	1,136,989	92,146	24,570	1,175,180	78,525	1,253,705	90.69	7.35	1.96	94.89	86.05	69.33	17.55	1.42	.38	19.35

From the preceding tables it appears that during the year 1908-9 there were nearly eighteen million (17,960,049) children in elementary schools, public and private; in secondary schools more than one million (1,034,827); in universities and colleges 183,344; in schools of medicine, law, and theology 65,783; in normal schools 82,288. Of these students 17,658,943 were found in public institutions, while 1,667,348 were receiving instruction in institutions under private control. In public schools of the United States (elementary and high schools) there were 506,040 teachers employed. Of this number 108,300, or 21.4 per cent, were men. It is interesting to note that the percentage of men has steadily decreased during the period for which statistics are available. In 1870 there were 38.7 per cent men; in 1890, 34.5 per cent were men; in 1900, 29.9 per cent were men, as against 21.4 per cent of men for the year 1908-9.

The fiscal statistics show the large amount of money necessary to provide free public education. Table A indicates a total of more than four hundred million dollars (\$403,647,289) raised for public schools. Of this amount \$13,746,826 was received as income of permanent funds and rents; \$63,247,354 from state taxes; \$288,642,500 from local taxes; and \$38,010,609 from all other sources. For teachers' salaries alone, there was spent during the past year \$237,013,913, while \$81,878,591 was spent for buildings, furniture, libraries, and apparatus. The school property in which public schools were conducted was valued at \$967,775,587. The liberal expenditure for public education seems still to be on the increase. The average cost per pupil has doubled within the last forty years. New types of education demand still more money, and question is being raised in many localities concerning the possibility of raising sufficient funds for the adequate support of public education. The demand that money spent for public education shall bring a maximum of return, and that no money shall be wasted, is not to be interpreted as a criticism of public education, but rather as a demand for the best possible organization and administration of our schools. The work which is being undertaken by the Bureau of Education to bring about a reform in accounting and in the reporting of fiscal statistics will help toward that standard of efficiency which it is the right and duty of every community to expect.

The remainder of this survey pertains to data collected by the Bureau of Education which do not appear in any other part of the report. The retardation and elimination of pupils from our schools, the economic status of the families from which our high-school students come, and some data concerning normal-school students will be treated.

RETARDATION AND ELIMINATION OF PUPILS.

In the discussion of retardation and elimination it has been assumed that the conditions which were found in a few cities were representative of the situation throughout the whole country. This supposition is verified by a study of 318 cities of varying size from all sections of the United States. The conclusions which are here given are based on an age grade census. Normal age is defined as 6 to 8 for the first grade, 7 to 9 for the second, 8 to 10 for the third, and so on. The largest age group is taken as a measure of the number entering school during the year for which the data were secured. This method of estimating the number of beginners has been found more reliable in the author's experience than the average of the ages 7 to 12, which has always proved too small where the actual number of beginners could be found. It is assumed throughout that a census taken on one day correctly represents the situation in the schools with regard to the number of each age in each grade; that, while somewhat larger gross numbers would have been found in each case, if the number belonging had been taken, the ratio of these numbers would remain practically unchanged. The census rather than the number belonging was taken in order to avoid the varying interpretation given to the term "number belonging."

The tables which follow show the frequency of the different percentages retarded one year or more (i. e., total retardation). Boys and girls are given separately.

BOYS.

Quantity: Per cent of the total number of boys.	Frequency: Number of cities.	Quantity: Per cent of the total number of boys.	Frequency: Number of cities.
8.....	2}	44.....	21}
10.....	5}	46.....	12}
12.....	9}	48.....	18}
14.....	5}	50.....	8}
16.....	1}	52.....	5}
18.....	5}	54.....	5}
20.....	9}	56.....	3}
22.....	5}	58.....	2}
24.....	8}	60.....	6}
26.....	14}	62.....	4}
28.....	17}	64.....	4}
30.....	11}	66.....	1}
32.....	26}	68.....	1}
34.....	17}	70.....	4}
36.....	23}	72.....	1}
38.....	26}	74.....	2}
40.....	16}		2}
42.....	23}		319

GIRLS.

Quantity: Per cent of the total number of girls.	Frequency: Number of cities.	Quantity: Per cent of the total number of girls.	Frequency: Number of cities.
6.....	2	44.....	10
8.....	9	46.....	3
10.....	7	48.....	6
12.....	3	50.....	5
14.....	7	52.....	2
16.....	11	54.....	3
18.....	10	56.....	5
20.....	12	58.....	7
22.....	20	60.....	1
24.....	14	62.....	0
26.....	25	64.....	1
28.....	23	66.....	3
30.....	19	68.....	3
32.....	21	70.....	2
34.....	18	72.....	0
36.....	17	74.....	1
38.....	22		
40.....	18		
42.....	9		
			319

These tables are interesting chiefly in showing the wide variability among cities. While it is quite common to find cities with from 25 to 50 per cent of the pupils retarded, there are 21 cities which show less than 15 per cent of retardation for boys and 17 cities show more than 60 per cent of the boys over age. It is interesting to note the distinct difference between the boys and the girls. The extremes are practically the same, but the distribution for girls as compared with that for the boys shows a much larger number of cases in the lower percentages and correspondingly few in the upper percentages. This difference in distribution becomes very clear in the diagram which follows:

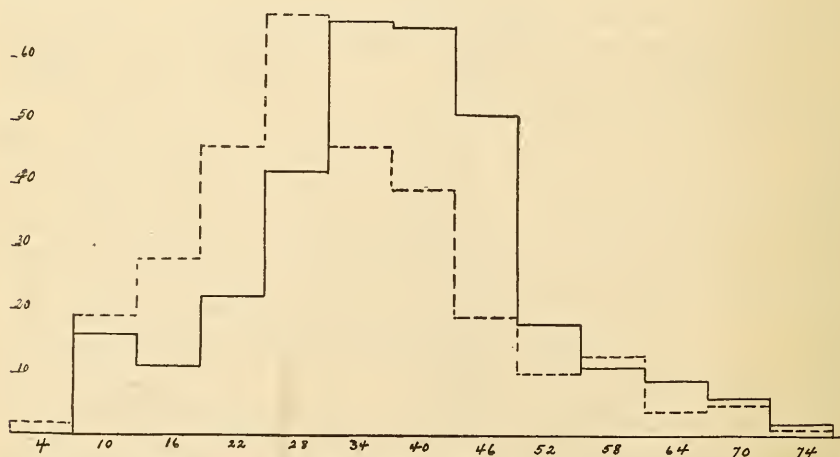


FIG. 1.—Frequency of the different percentages of boys and girls (boys solid line, girls broken line) retarded one year or more (i. e., total per cent of retardation), being a graphic representation of the table above. Percentages on the horizontal, number of cities on the vertical scale.

It is not simply the total per cent of retardation which challenges attention. Quite as remarkable is the distribution in terms of one

year, two years, three years, and four or more years over age. The following tables of medians will indicate roughly the distribution of retardation in terms of years retarded.^a

Medians derived from tables which give the different percentages of boys and girls who are either over or under the normal age of pupils for their respective grades.

Cities classified by population.	Over-age pupils.										Under-age pupils.	
	1 year.		2 years.		3 years.		4 years and over.		Total.		1 year and more.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
25,000 and over (133 cities) . .	20	18	10	9	5	3	2	1	38	32	4	4
Less than 25,000 (186 cities).	20	18	11	8	4	3	2	1	38	36	4	5

The pupils under age are all reported in a single table because there are very few children more than one year under age. Of the 318 cities there are only 44 which show more than 1 per cent of their pupils more than one year under age, and there are none which show more than 4 per cent more than one year under age. It is true that 83 cities show a total of more than 10 per cent under age, and that in extreme cases this under-age group equals from 20 to 40 per cent of the whole number of pupils. Of those who are under age, however, almost all belong to the group one year under age. Of those one year under age by far the majority are accounted for in the extremely large under-age groups by children who have entered school at 5 years of age.

Another interesting contrast between boys and girls is found by comparing the per cent of the largest age group (the entering group) found in the upper grades in the high schools.^b

Median per cent of the largest age group found in each grade.

Cities classified by population.	Seventh grade.		Eighth grade.		First year high school.		Second year high school.		Third year high school.		Fourth year high school.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
25,000 and over (133 cities) . .	68	74	52	60	36	46	22	30	14	22	10	18
Less than 25,000 (186 cities).	70	74	54	60	40	50	26	34	18	20	12	20

^a The median is the middle point, e. g., the median per cent of boys one year over age is 20; this means that in half of the cities 20 per cent or more of the boys are over age and that in half of the cities 20 per cent or less than 20 per cent of the boys are over age.

^b The fact that we do not know the exact number of pupils who enter the schools during any one year makes it impossible to determine exactly the proportion of pupils who leave school before they reach any given grade. Whenever an attempt is made to determine the number who leave school, or in other words "elimination," some assumption must be made regarding the number who entered school. In reaching the results stated above the assumption is made that the largest number of pupils of any age enrolled in the school is the best approximation to the number who enter school annually.

The following table shows the frequency of the different percentages of the largest age group found in the fourth year of the high school. (Only 277 cities reported pupils in the fourth year of the high school.)

Per cent of largest age group.	Number of cities.		Per cent of largest age group.	Number of cities.	
	Boys.	Girls.		Boys.	Girls.
2.....	5	2	24.....	7	20
4.....	23	4	26.....	9	11
6.....	28	11	28.....	5	10
8.....	36	12	30.....	3	6
10.....	35	18	32.....	2	10
12.....	34	25	34.....	1	6
14.....	28	29	36.....	0	5
16.....	19	26	More than 36.....	3	12
18.....	19	28			
20.....	12	25	Total.....	277	277
22.....	8	17			

This table shows clearly the fact indicated in the table of medians, namely, that the per cent of girls retained to the last year of the high school is in general much greater than of boys. Similar tables could be given for seventh and eighth years of the elementary school and for the first three years of the high school.

The graphic representation of this table brings out clearly the difference in persistence for boys and for girls.

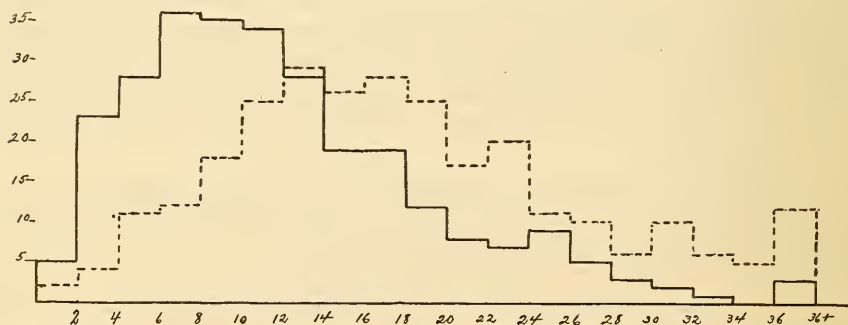


FIG. 2.—Frequency of the different percentages of the entering group (largest age group) found in the fourth year of the high school. Boys indicated by the solid line, girls by the broken line. A graphic representation of the data contained in the table above. Percentages on the horizontal, number of cities on the vertical scale.

The situation in our schools throughout the United States demands that continued attention be given to the problem of retardation. Special classes for the bright, the slow, the backward, and the deficient should be established. A year's work in school must not be defined arbitrarily in terms of the work which can be done by children of good ability. Instead of repeating the same work over and over again, children should have the opportunity to make such progress from year to year as for them is possible.

In any study of the problem of retardation it would seem advisable to keep the data for boys and girls separate. In many cities the percentage of retardation should be greatly reduced and the number

accelerated greatly increased. More than two-thirds of the cities reporting show more than 30 per cent of the boys retarded. With the reduction in the amount of retardation there will come a decrease in the number eliminated, and our schools may approach a condition which will enable us to claim that we provide equality of opportunity.

THE ECONOMIC STATUS OF HIGH-SCHOOL STUDENTS.

From an inquiry sent out by the Bureau of Education about two years ago opportunity was given to report the economic status of public high-school students. The first 25 students, taken alphabetically from the freshman class, were reported by 1,473 schools under the following heads: (1) Whose fathers are professional men; (2) whose fathers operate farm worth over \$5,000; (3) whose fathers operate farm worth less than \$5,000; (4) whose fathers make \$2,000 or more per year in trade or commerce; (5) whose fathers make between \$1,000 and \$2,000 in trade or commerce; (6) whose fathers are skilled artisans making \$750 a year or more; (7) whose fathers are unskilled laborers; (8) whose fathers are dead. The table which follows indicates the distribution of students among these several groups:

	Per cent.
1. Whose fathers are professional men.....	10
2. Whose fathers operate farm worth over \$5,000.....	21
3. Whose fathers operate farm worth less than \$5,000.....	15
4. Whose fathers make \$2,000 or more per year in trade or commerce.....	10
5. Whose fathers make between \$1,000 and \$2,000 in trade or commerce.....	14
6. Whose fathers are skilled artisans making \$750 a year or more.....	14
7. Whose fathers are unskilled laborers.....	16

NOTE.—The group whose fathers were dead were not considered in calculating these percentages, because it is assumed that they would distribute themselves among the several groups in about the same proportion as do those whose fathers are living.

These figures indicate the thoroughly democratic character of our public high schools. In any community one may expect to find children from the families of professional people along with the children of day laborers. The opportunity to advance in that type of work which leads to the college, university, professional or technical school is enjoyed by all. It is in this particular that we have made good our boasted claim of equality of opportunity. While the high school is thoroughly cosmopolitan in its membership, it is noticeable that a much larger proportion of children from the well-to-do families than from those of more moderate circumstances or from the families of the poor are found in our high schools. It needs also to be remembered that those who do not wish to take the course which leads to college or professional school have as yet very little provision made for their education. We may be proud of the great number of boys and girls enrolled in our high schools, but we are justly ashamed of the meager opportunity afforded those who are to enter the industries.

SOME DATA CONCERNING NORMAL-SCHOOL STUDENTS.

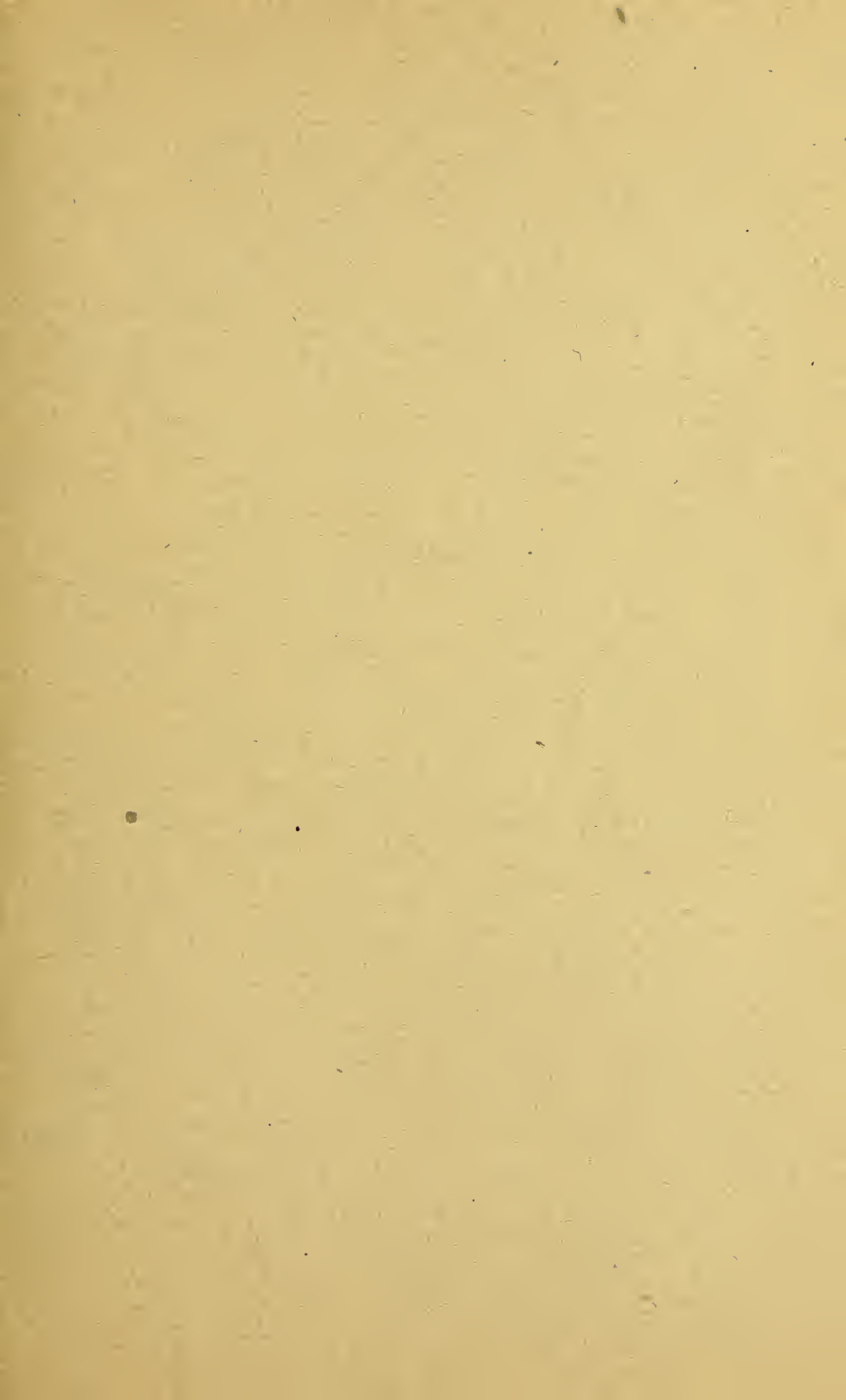
A similar inquiry was made concerning the economic status of normal-school students. The results for 24 normal schools having a two-year course appear in the table given below:

	Per cent.
1. Whose fathers are professional men.....	11
2. Whose fathers operate farm worth over \$5,000.....	11
3. Whose fathers operate farm worth less than \$5,000.....	11
4. Whose fathers make \$2,000 or more per year in trade or commerce.....	11
5. Whose fathers make between \$1,000 and \$2,000 in trade or commerce.....	30
6. Whose fathers are skilled artisans making \$750 a year or more.....	17
7. Whose fathers are unskilled laborers.....	10

The results from 14 normal schools having a four-year course follow:

	Per cent.
1. Whose fathers are professional men.....	5
2. Whose fathers operate farm worth over \$5,000.....	34
3. Whose fathers operate farm worth less than \$5,000.....	24
4. Whose fathers make \$2,000 or more per year in trade or commerce.....	5
5. Whose fathers make between \$1,000 and \$2,000 in trade or commerce.....	10
6. Whose fathers are skilled artisans making \$750 a year or more.....	13
7. Whose fathers are unskilled laborers.....	10

In the case of the normal schools an inquiry was included concerning the experience of students previous to their entrance upon normal school work. In the two-year schools it was found that 9 per cent of the students had taught before entering normal school. In the four-year schools 35 per cent had had experience before beginning their professional training. These facts indicate something of the status of professional training in this country. The problem which confronts us has to do with the type of individual who is to be given professional training with respect to her home environment, and with regard to the experience which may have preceded professional training. The question may well be raised concerning the length of course necessary for students who come direct from the high school and whose home environment has not contributed largely to the development of that culture which should characterize the teacher, nor toward the establishment of ideals which we consider typically American. In some of our larger centers of population the problem of correct English speech on the part of teachers can not be ignored. The fact that so many students have taught before entering upon their professional course indicates a lamentable lack of standard, more especially in the rural districts. As a matter of fact, we are not training enough teachers to take the place of those who drop out each year. Teaching must be made more attractive by reason of higher salaries before we can hope to recruit enough students for our normal and training schools to insure trained teachers in the grade schools.





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